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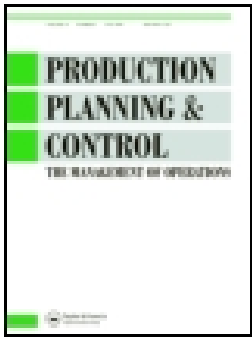
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Inter-organizational governance: a review, conceptualisation and extension

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ABSTRACT

Although the concepts of relational and contractual governance in inter-organizational relationships have attracted academic and practitioner interest over the last decades, to date there have been limited comprehensive and systematic efforts to review, analyse and synthesise extant literature. We review and analyse 1,415 publications identified from a wide range of management disciplines and journals from 1990 to 2018. We deploy bibliographic and content analyses to offer a comprehensive literature analyses and synthesis and subsequently develop and position a multidimensional framework of exchange governance. The proposed framework covers existing conceptualisations of exchange governance and its diverse mechanisms, environmental dimensions influencing the use of exchange governance mechanisms and performance implications. We uncover areas that are currently under-studied and draw out fruitful future research avenues.

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Exchange governance; contracts; trust; buyer-supplier relationships; inter-organizational relationships; literature review



1. Introduction

The development and management of inter-organizational relationships (IORs) has been extensively researched within organization and management studies (Das and Teng 1998; Vanneste and Puranam 2010). Organizations forming these relationships could be public, private, industrial, for-profit or non-for profit in nature. IORs are observable at several levels such as dyadic to 'multiplicitous', consisting of networks of many organizations (Cropper et al. 2008). The study of IORs focuses on the characteristics and patterns, origins, rationales and consequences of such relationships (Cropper et al. 2008).

Inter-organizational governance mechanisms refer to the formal and informal rules of exchange between partners (North 1990; Vandaele et al. 2007). The deployment of these governance mechanisms to nurture and manage IORs is an important phenomenon in the sense that it affects not only the performance of focal firms but also that of their suppliers, customers and business partners (e.g. Carson, Madhok, and Wu 2006; Klein-Woolthuis, Hillebrand, and Nooteboom 2005). Therefore, IOR governance mechanisms are especially important to operations and supply management (OSM) research (e.g. Cao and Lumineau 2015; Hartmann et al. 2014). Prior literature has distinguished between two main types of governance mechanisms in IORs: contractual and relational governance mechanisms (Griffith and Myers 2005; Rousseau et al. 1998). Contractual governance is manifested in 'explicit, formal, and usually written contracts' (Vandaele et al. 2007, p. 240) that are mostly very detailed and legally

binding agreements, and which specify roles and obligations of contracting parties (Lyons and Mehta 1997). Relational governance refers to more emergent governance mechanisms that are manifested in socially derived 'arrangements' and that are more informal in comparison to contractual governance (Vandaele et al. 2007).

Advances in how inter-organizational governance is conceptualised and operationalised are reflected in the growing number of academic literature published on the topic (e.g. Poppo and Zenger 2002; Lumineau 2017; Zheng, Roehrich, and Lewis 2008). Although such literature provides important insights, it also suffers from: (i) a fragmentation among several research streams from economics, organization studies, strategic management, law, and operations management spanning different levels of analysis (see Schepker et al. 2014); (ii) a lack of conceptual clarity of the notion and interplay (i.e. substitute vs. complementarity discussions) of inter-organizational governance mechanisms, antecedents that influence the type of governance mechanisms used and subsequent impact on relationship performance (see Cao and Lumineau 2015), and (iii) limited effort to synthesize prior research by cutting across disciplines and various key themes. Moreover, prior studies have mainly focused on governance mechanisms in horizontal relationships such as alliances and further attention is needed to explore exchange governance in, for instance, buyer-supplier relationships (Lumineau 2017; Roehrich and Lewis, 2014; Schilke and Lumineau 2018). We reason that prior studies' more context-

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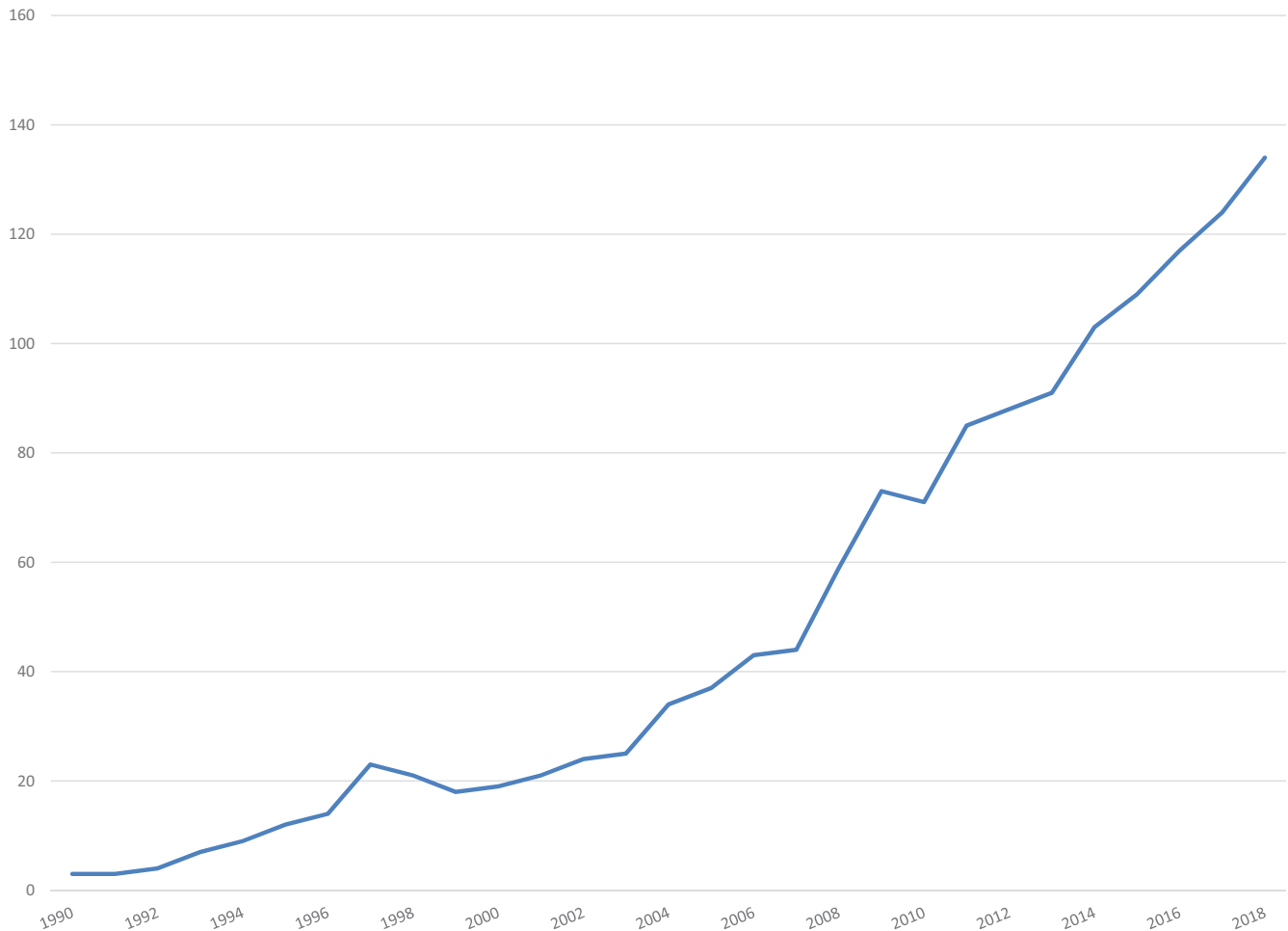


Figure 1. Growth of articles on inter-organizational governance in management journals.

specific treatment inhibits integration and holistic evaluation of the exchange governance literature. For instance, despite offering valuable insights, Vandaele et al. (2007) focus mainly on business services exchanges. Similarly, the study by Cao and Lumineau (2015) offers insights via a meta-analysis of IORs but does not deploy a comprehensive literature review spanning academic disciplines and industry contexts to take stock of and synthesise the body of knowledge (Tavares Thomé, Scavarda, and Scavarda 2016).

This study complements extant research efforts in analysing and synthesising prior governance studies and positions a research agenda and framework for future research avenues, posing the following research questions: (i) *What is the current state of inter-organizational governance in management research?* and (ii) *What are the emerging themes of interest for management research?* Such a comprehensive review is highly relevant in order to advance our understanding of governance mechanisms as well as how they have been conceptualised and approached, both theoretically and empirically, across disciplines. Our research demonstrates a surge of interest in governance literature over more than two decades, with the vast majority (over 80%) of peer-reviewed journal papers published over the last decade (see Figure 1). The recent exponential growth in the literature suggests that the

time is ripe to take stock of where inter-organizational governance efforts are.

Our study draws together analyses of 1,415 published governance articles, offering a comprehensive review of key research streams in extant governance mechanisms studies. Moreover, we provide a better understanding of how contractual and relational governance mechanisms have been defined and conceptualised. Second, we position a conceptual framework synthesising multiple theoretical perspectives and associated constructs in terms of governance determinants, mechanisms and performance outcomes. The developed framework contributes to existing research by serving as a conceptual map of the field. It provides input for evaluating where the literature currently is and pointing out promising avenues for future research.

The paper is structured as follows. It commences by outlining the comprehensive review method adopted. The article is then split into two parts. Part one maps the field and uses bibliographic and content analyses to offer a range of analyses and examine changes in exchange governance research. Part two offers a synthesis and comprehensive analysis of the emerging themes, linking exchange governance mechanisms, antecedents and performance implications. This section also draws out theoretical gaps and positions a

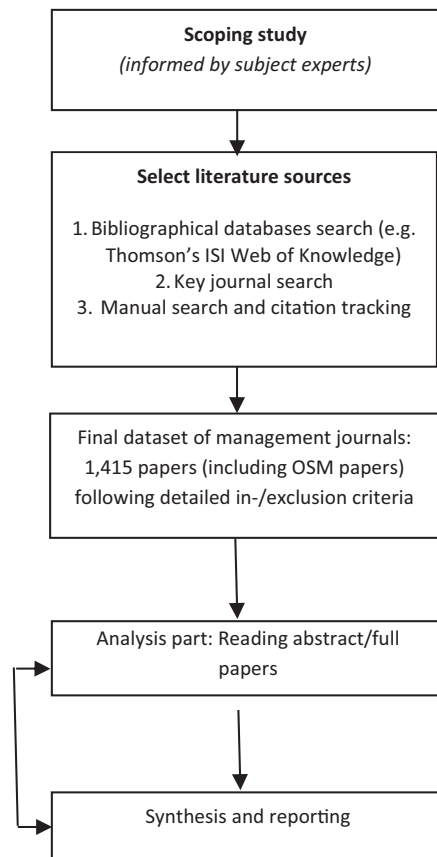


Figure 2. Summary of comprehensive review process (adapted from Rashman, Withers, and Hartley 2009, p. 5).

multi-dimensional framework to bring together dispersed research on exchange governance. Using this framework, current literature limitations are pointed out and future research avenues are discussed.

2. Comprehensive review approach

With the increasing attention towards studying contractual and relational governance mechanisms in management studies and indeed in OSM, we offer a comprehensive literature analysis and synthesis of prior research on governance mechanisms (Lumineau 2017; Roehrich and Lewis 2014). Literature reviews are vital in establishing key themes and relationships amongst the concepts under study, thus driving more structured future research efforts (Burgess, Singh, and Koroglu 2006). Our search strategy aimed at mitigating bias and establishing a comprehensive search and analysis framework by incorporating database search, cross-referencing between authors and applying agreed on inclusion and exclusion criteria (Durach, Kembro, and Wieland 2017; Rashman, Withers, and Hartley 2009). We adopted an iterative review procedure (Figure 2), commencing with an initial scoping study to set the boundaries for our study (Tavares Thomé, Scavarda, and Scavarda 2016) and identifying seminal exchange governance papers (Heide and John 1992; Poppo and Zenger 2002). This initial analysis helped to establish a focus for subsequent analysis stages by, for instance, specifying the search period and terms. In addition,

seven scholarly subject experts were interviewed to further improve the search strategy and search terms.

To identify articles for this review study, the main database ISI Web of Knowledge was searched using terms such as relational governance, contractual governance, relationship governance mechanism*, governance interplay, inter-organizational* trust contract*, inter-personal trust contract*, inter-organizational* contract*, contract network*, inter-organizational* trust* and trust governance. While ISI Web of Knowledge is considered the most comprehensive database for scholarly work, we also consulted other databases, such as Emerald, Business Source Premier, Science Direct and Ingenta to achieve even better coverage of journals.

Figure 2 outlines the approach used to identify articles published during the period 1990–2018. While only a relatively small number of papers was published before 1990, recent years show an immense increase of interest in management research on exchange governance (e.g. Klein-Woolthuis, Hillebrand, and Nooteboom 2005; Kreye, Roehrich, and Lewis 2015; Lumineau 2017; Poppo and Zenger 2002). As such, papers published between 1990 and 2018 offered a sufficient timespan to enable a comprehensive and meaningful analysis. In order to obtain a more comprehensive overview of extant governance research, we searched for management journals across areas including, but not limited to, marketing, strategy, organization studies, international business as well as OSM. We intentionally used broad search definitions as the concept of inter-organizational governance is used and published in a broad range of journals. Three researchers independently judged the identified set of papers based on inclusion criteria, being that identified papers should be from scholarly, peer-reviewed publications and of conceptual and/or empirical nature. For the selection of articles into the final dataset, the researchers aimed for 100% agreement. When this level of agreement was not reached during the initial reading of abstracts, all researchers read and discussed papers in detail and made a joint decision on the inclusion/exclusion of the article into the final dataset.

The search led to the identification of 1,415 publications forming the dataset. This dataset included OSM articles. We specifically zoomed in on OSM articles with an aim to detect publication patterns. This exercise did not lead to drastically diverging results and we decided to present publication patterns for the whole dataset. In order to produce new insights, data analysis and synthesis can be seen as primary value-added results of this comprehensive literature review (Crossan and Apaydin 2010). Analysis and synthesis of identified papers consist of two parts: (i) examining patterns of publications over the analysed period and (ii) presenting fruitful future research avenues drawn from the identification of thematic management research issues.

3. Part I: publication patterns

This section critically reflects on the analyses of the identified dataset. It offers key observations that are worth highlighting at this stage before moving on to discuss emerging research themes. Figure 3(a–c) summarises the key disciplines, levels of

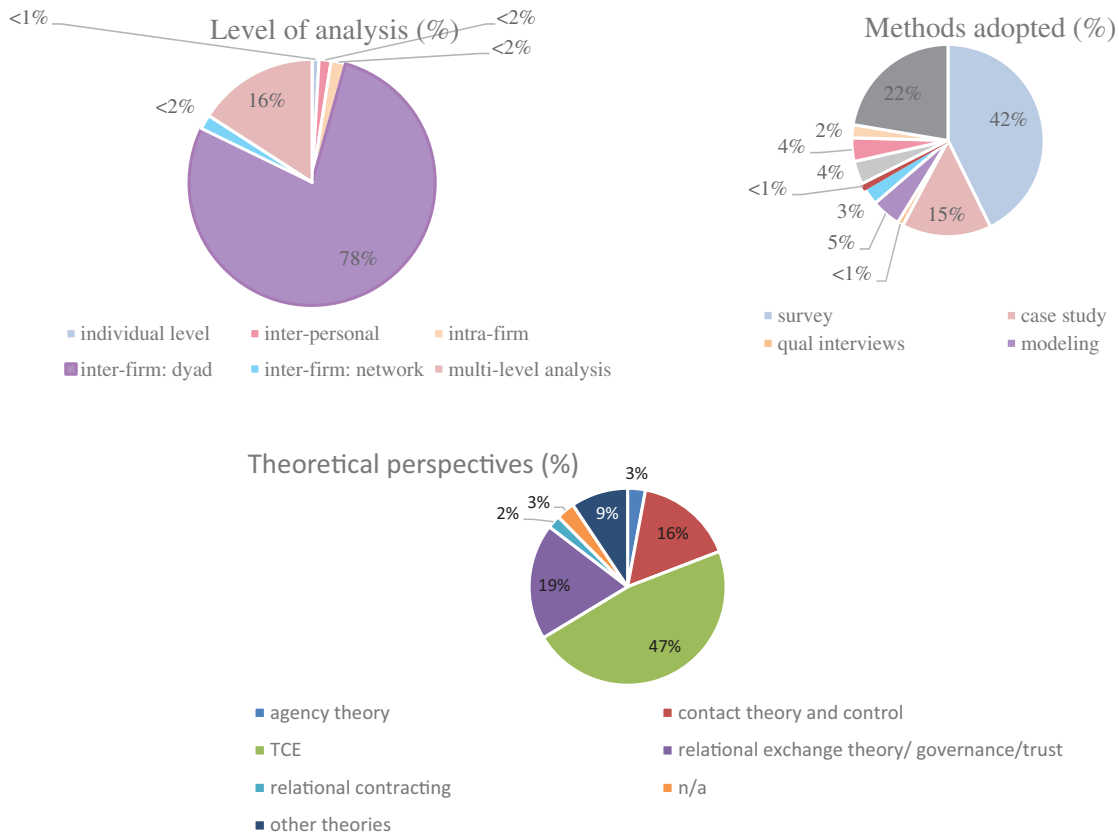


Figure 3. (a–c) Key characteristics of extant governance exchange research.

analysis, methodological approaches and theoretical perspectives adopted to date. Inter-organizational governance has been subject to scrutiny by researchers from diverse backgrounds, thus reflecting the inter-disciplinary nature of the phenomenon which presents overlapping economic, social, legal and political implications (North 1990).

Our review revealed that very few studies (<2%, see Figure 3(a)) have focused on network governance. Therefore, for the purposes of conducting the review, we restricted our analysis to the dyadic level of analysis. A reason for the dyadic focus currently dominating in inter-organizational governance research (78%) might be the fact that researchers often face challenges in conducting research and collecting data at a network level (see Easton 2010). Relative to the importance of relational governance mechanisms at an inter-personal and inter-organizational level, only a few studies employ multiple levels of analysis (16%; e.g. Kamann et al. 2006; Zheng, Roehrich, and Lewis 2008, and very few studies in OSM). Prior studies have furthermore mainly focused on governance mechanisms in developed countries, with the USA and UK accounting for over 50% of all published papers. China is becoming increasingly interesting for governance researchers with a current share of 9.5%. Although relatively limited, the number of publications that use data across countries has started to grow in recent years (<10%; see for example Yang, Wacker, and Sheu 2012).

Second, there is evidence of a variation of governance research methodologies in the published literature. Survey research tends to be the primary data collection method (42%). Surveys have particularly been dominant in studies into

the performance implications of contractual and relational governance (e.g. Sumo et al. 2016). The use of case study methodologies is more limited (15%). A few studies (4%) adopt mixed-method designs, such as by combining questionnaires with interviews (notable examples are Blumberg 2001; Gulati and Nickerson 2008) or conducting experiments (e.g. Tangpong, Hung, and Ro 2010). Surprisingly, despite the long-term nature of IORs and the importance to investigate exchange governance over time, there is only limited evidence of publications adopting a longitudinal or processual research perspective (e.g. Roehrich and Caldwell 2012).

Third, certain theoretical perspectives seem to be favoured in the analysis of exchange governance. In particular, transaction cost economics (TCE) appears to be the dominant theoretical frame of reference (e.g. Dyer 1997). Social exchange and management control theories are other conceptual lenses frequently adopted in extant literature (e.g. Faems et al. 2008; Jap and Ganesan 2000). Given the complexity of the phenomena under investigation, several studies adopt multiple theoretical perspectives to serve their purposes (e.g. Mellewigt, Madhok, and Weibel 2007). For example, extant research studies investigating the substitution and complementarity of relational and contractual governance mechanisms combine TCE with theories of social and relational exchange (e.g. Liu, Luo, and Liu 2009; Poppo and Zenger 2002; Sumo et al. 2016).

Surprisingly, well-established theoretical perspectives such as agency theory has not been much in focus, accounting for only around 2% of investigated management papers (see for instance Lazzarini, Miller, and Zenger 2004). Similarly,

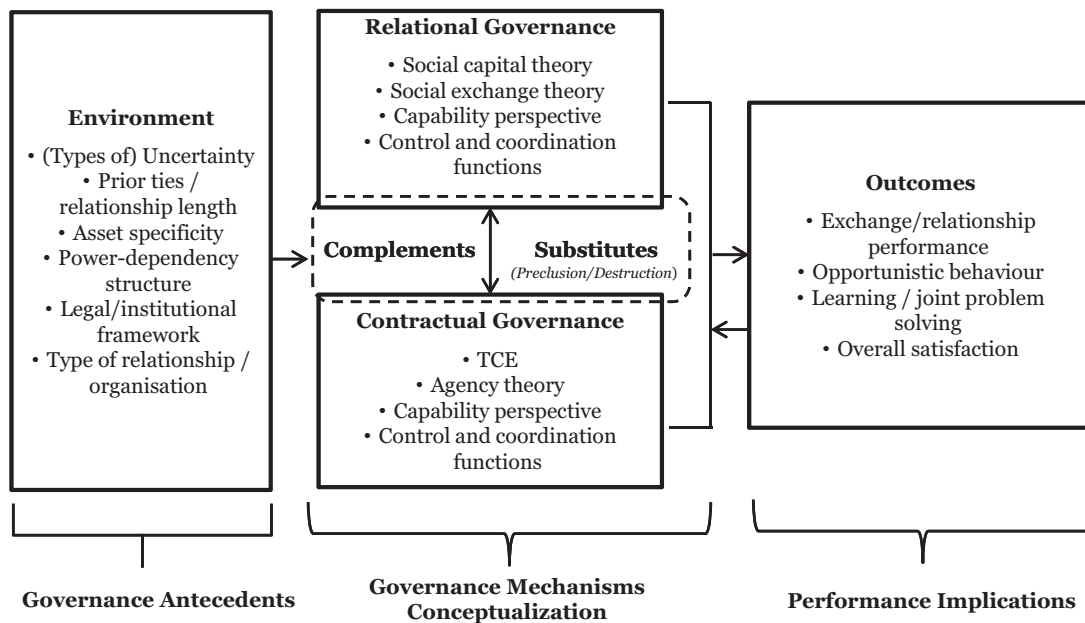


Figure 4. A multidimensional framework of inter-organizational governance.

other theories such as resource-based view and dynamic capabilities perspectives appear to be under-utilised too. More recently, the organizational information processing theory (OIPT) has experienced a resurgence in inter-firm governance studies (e.g. Lumineau 2017). For example, studies have found that contracts designed with an emphasis on control functions would orient the need for processing information pertaining to the monitoring of partners' activities (Provan and Skinner 1989). In contrast, contracts emphasising the coordination function would facilitate the flow and exchange of information between partners (Lumineau and Henderson 2012; Malhotra and Lumineau 2011; Reuer and Ariño 2007).

Our review has produced a clearer picture of growing but fragmented governance research. Based on the comprehensive analysis of the dataset, we depict a multidimensional framework of inter-organizational governance. Figure 4 summarises key concepts (environment, relational and contractual governance interplay as well as performance outcomes) derived from our analysis. The arrows flowing from outcomes back to governance mechanisms suggest that actual performance outcomes in IORs (e.g. opportunism or poor exchange or relationship performance) may trigger adaptations in contractual and/or relational governance mechanisms (e.g. Selviaridis and Spring 2018). This figure forms the basis for the synthesis efforts presented in subsequent sections.

4. Part II: synthesis and emerging research themes

This section provides a critical reflection and synthesis of inter-organizational governance research emerging from the analysis part, paving the way for future research avenues.

4.1. Conceptualization and evolution of governance mechanisms interplay

Inter-organizational governance mechanisms refer to the formal and informal rules of exchange between partners (North

1990; Vandaele et al. 2007; Poppo and Zenger 2002). Previous studies have distinguished between two types of governance mechanisms regarding IORs: economic strategies such as contracts, and relational governance which is derived from trust and social norms (Griffith and Myers 2005; Vandaele et al. 2007). Social norms are considered as behavioural guidelines that enforce social obligation in the relationship (Caldwell, Roehrich, and George 2017; Cannon, Achrol, and Gundlach 2000; Heide 1994). While in this paper our focus is on formal contracts, we acknowledge that there are several other definitions in the literature referring to 'informal' or 'normative' contracts, whose main characteristic is that they are not written and legally enforceable. In addition, the literature refers to relational contracts as a third form of contracting between classical and neoclassical contracting (Williamson 1985), which entails flexible and open-ended contractual specifications and provisions to allow for adaptation in relationships given the inherently incomplete nature of formal contracts (see MacNeil 1980). Relational contracts are a type of formal contracts in the sense that they are written and legally enforceable, and therefore are within the scope of our analysis.

While research on exchange governance has steadily increased in recent years, our analysis also shows a lack of common conceptualisation and operationalisation. The relationship between governance antecedents and governance mechanisms has been a subject of debate in the literature (Cao and Lumineau 2015; Poppo and Zenger 2002). Early studies adopted a TCE perspective and tried to explore the relationship between the transaction characteristics, for example, uncertainty and asset specificity as well as contract design (Scheper et al. 2014). While transactions characterized by lower uncertainty and asset specificity do not require detailed contracts, partners design detailed contracts, with safeguarding clauses while conducting uncertain, asset-specific transactions (Reuer and Ariño 2007). Real options theory provides an alternative perspective to the relationship

between uncertainty and contract design. While the TCE perspective implies that detailed contracts should be designed in the face of uncertainty, a real options perspective calls for more flexible contracts (Chi 2000). This flexibility allows partners to refrain from making irreversible investments. Furthermore, since the transaction characteristics, as well as familiarity between partners, change over time, flexible contracts allow for modification in response to the changing environment (Scheepker et al. 2014).

Similarly, scholars have argued that the development of trust and norms between organizations appear to be less driven by the transaction characteristics and are more of a function of idiosyncratic capabilities of organizations (Dyer and Singh 1998; Madhok and Tallman 1998). Furthermore, the relationship between contractual and relational governance mechanisms appears to be even more tenuous (e.g. Cao and Lumineau 2015). Early studies focused on the issue argued that contracts have a damaging effect on relational governance. The core argument of this stream of literature was that the use of detailed contracts signals a lack of trust, which could damage the prospect of relational governance (Ghoshal and Moran 1996; Heide and John 1992; Macaulay 1963). Furthermore, detailed contracts create an environment of vigilance, preventing the development of trust through the reduction of opportunities for a spontaneous display of good intentions (Frey and Jegen 2001; Malhotra 2009). Another stream of literature has argued that relational norms, such as trust, make contracts redundant, as trust can govern relationships by itself (Das and Teng 2001; Gulati 1995). In other words, in a relationship characterized by long-term trust, organizations would choose to employ more informal modes of governance (Gulati and Nickerson 2008).

Over time, with the conceptual work by Das and Teng (1998) and the seminal study by Poppo and Zenger (2002), scholars moved towards the argument that contractual and relational governance mechanisms complement each other. This means that contracts can enhance trust while trust, in turn, can trigger 'learning to contract' effects whereby contracting parties learn to jointly design more effective contracts and to collaborate (Mayer and Argyres 2004). Contracts aid in the development of trust through the reduction of information asymmetry between both parties (Bastl et al. 2012; Liu, Luo, and Liu 2009). Moreover, as organizations enter into long-term relationships, they become more familiar with each other (Gulati 1995) and learn to specify more detailed contracts (Poppo and Zenger 2002; Ryall and Sampson 2009).

Although the debate of a substitution and complementary logic is ongoing in the literature, more recent works have provided some clarification on this divide (Cao and Lumineau 2015; Howard et al. 2019; Lumineau 2017). Scholars have drawn a distinction between the control and coordination function of formal contracts and argued that these two functions interplay differently with relational modes of governance. The control function refers to safeguarding parties against potential opportunism, whereas the coordination function emphasizes delineation of roles/responsibilities, communication and information sharing and

joint problem solving (Kapsali, Roehrich, and Akhtar 2019; Scheepker et al. 2014). While the control function signals a lack of trust and negatively influences goodwill trust, the coordination function of contracts creates a common knowledge structure, which aids in the development of competence trust (Malhotra and Lumineau 2011; Weber and Mayer 2011).

More recent studies on inter-organizational governance have moved towards exploring contractual governance in further detail. For example, the literature shifted its focus towards exploring issues pertaining to contract design (Bercovitz and Tyler 2014; Dean, Griffith, and Calantone 2016; Ozmel et al. 2017), the content of the contract (Duplat and Lumineau 2016; Schilke and Lumineau 2018) and the link between contracting and a range of performance outcomes such as supply chain alignment (Selviaridis and Spring 2018), new product performance (Dean, Griffith, and Calantone 2016), exchange performance (Poppo and Zhou 2014) and dispute resolution (Lumineau and Malhotra 2011).

Our comprehensive review led to the identification of key concepts and mechanisms pertaining to inter-organizational governance (see Figure 4). These concepts are presented in Table 1 along with key gaps in our knowledge of these concepts. In accordance with Lumineau and Oliveira (2018), we framed these knowledge gaps around key 'blind spots' in research on inter-organizational governance. The subsequent sections explore key gaps in further detail, thus supporting the development of fruitful future research avenues.

4.2. Advancing inter-organizational governance research

The following sections position key knowledge gaps and blind spots and discuss opportunities for future research efforts to advance inter-organizational governance research. The intention here is not to elaborate upon all blind spots identified in Table 1, but rather to offer some more specific insights and discussions with regard to future directions of inter-organizational governance research, considering also suitable theories and research designs.

4.2.1. Longitudinal, multi-level and dual-party research perspectives

Taking into consideration the fact that relationships usually consist of a large number of interfaces between individuals and organizations (e.g. between individuals, teams and organizations), we contend that they are not accurately represented as a single entity (focus on one party only), focusing on one level of analysis only or in a static picture (Lumineau and Oliveira 2018). There has been limited attention on a longitudinal understanding of how governance mechanisms evolve over time in IORs (notable exemption is, for instance, the study by Zheng, Roehrich, and Lewis 2008). Parties in long-term IORs will periodically alter and adjust governance mechanisms and accompanying safeguards, when deemed necessary and depending on the relative weight given to governance mechanisms at specific points in

Table 1. Key concepts and knowledge gaps for inter-organizational governance research.

Key concept	Exemplary key papers	Key takeaways	Knowledge gaps/blind spots for further research
Uncertainty	Geyskens, Steenkamp, and Kumar (2006); Rindfleisch and Heide (1997); Selviaridis (2016)	Behavioural and environmental sources of uncertainty influence contract design and the functionality of contract vis-à-vis relational governance mechanisms	<ul style="list-style-type: none"> • Future studies should consider possible asymmetries between parties with regards to the impact of uncertainty. • Future research needs to consider the viewpoints of a variety of different organizations across different sectors and countries. Moreover, changes of uncertainty over time need to be considered.
Prior ties/relationship length	Cao and Lumineau (2015); Reuer and Ariño (2007); Vanneste and Puranam (2010)	Prior ties/exchange experience influences the detail of contractual agreements and the degree of relational governance mechanisms; prior ties /relationship length moderates the interplay of contractual and relational governance	<ul style="list-style-type: none"> • Further research needs to consider a more nuanced conceptualisation of time and the length of the relationship concerning governance interplay. Most prior studies conceptualised time linearly, but following Ancona, Okhuysen, and Perlow (2001), time could be conceptualized in other ways. For instance, time could be interpreted differently by both parties in the relationship (subjective time), it could be conceptualised as renewing or restarting after a period of time (cyclical time), and it could be used as a reference point around which activities are examined (event time). • Prior studies offer limited insights into the impact of prior ties and its impact on the contracting process. There is a limited understanding of how the contracting process unfolds over time. In other words, future studies need to unpack how contracts are initially created and then enacted (Schilke and Lumineau 2018). • Impact on promise of future business (shadow of the future) on the use of contract provisions needs to be explored (Schepker et al. 2014).
Asset specificity	Heide and John (1992); Williamson (1985)	High levels of asset specificity lead to reliance on contractual safeguards to mitigate opportunism; Relational norms can be necessary complements to manage risks related to asset specificity	<ul style="list-style-type: none"> • There is a paucity of studies distinguishing between buyer and supplier asset specificity and exploring its influence on governance mechanisms (Vandaele et al. 2007). • Future research needs to explore possible asymmetries (e.g. power, information, trust) between parties in the relationship and the impact of asset specificity to further heighten these asymmetries.
Power-dependency structure	Lusch and Brown (1996)	Power-dependency structure in inter-organizational relationships has an impact on the choice of governance mechanisms	<ul style="list-style-type: none"> • There is a paucity of literature exploring how both organizations in a relationship appropriate more value through the negotiation of favourable contracts. Most prior research focuses on one organization's bargaining power on the contract structure (Argyres and Bercovitz 2015). • Future studies should also uncover how the interaction of power and contracting may contribute to achieve supply chain alignment (Selviaridis and Spring 2018).
Legal/institutional framework	Zhou and Poppo (2010)	Institutional set up (e.g. legal /regulatory framework) impacts on the effectiveness of governance	<ul style="list-style-type: none"> • Further studies should explore the possible influence of institutional, legal and cultural contexts on the

(continued)

Table 1. Continued.

Key concept	Exemplary key papers	Key takeaways	Knowledge gaps/blind spots for further research
		mechanisms as it influences how contracts are enforced and which behaviours are (socially) acceptable	<ul style="list-style-type: none"> relationship between governance mechanisms and performance. Combining this macro unit of analysis with the inter-organizational level of analysis, studies could address the blind spot of focusing on a single level of analysis (Lumineau and Oliveira 2018).
Type of relationship/organization	Cao and Lumineau (2015); Mayer and Teece (2008)	Type of relationship (e.g. strategic alliances, buyer-supplier relationships; cross-border exchanges) or organization (e.g. public or private) influences the effects of governance mechanisms	<ul style="list-style-type: none"> Recent studies have called for more research that explore the differences between contracts with varied functional purposes across different organizational forms (Ranganathan, Ghosh, and Rosenkopf 2018). Partnering organizations with different types of organizational structures and objectives may have different assumptions with regards to governance mechanisms. Further research is needed to explore these possible asymmetries.
Relational and contractual governance and their interplay	Cannon, Achrol, and Gundlach (2000); Heide and John (1992); Klein-Woolthuis, Hillebrand, and Nooteboom (2005); Poppo and Zenger (2002); Zhou and Poppo (2010)	Both governance mechanisms are vital in inter-organizational relationships; the interplay of governance mechanisms is reliant on different antecedents; governance interplay will have an impact on performance	<ul style="list-style-type: none"> Future research needs to consider different types of trust (e.g. competence-based) and their impact on governance mechanisms interplay. Further research is required to also understand the impact of different types of contracts (and their specificity) such as performance-based contracts (Essig et al., 2016) and their impact on governance mechanisms interplay (e.g. Cao and Lumineau 2015; Selviaridis, 2016). Limited research has so far addressed the interplay of different governance functions and possible governance dysfunctions (e.g. Howard et al. 2019) and their development over time.
Exchange/relationship performance	Cao and Lumineau (2015); Liu, Luo, and Liu (2009)	Performance of the exchange and/or partners in terms of quality, cost and on time deliveries; Joint use of governance mechanisms may increase relationship performance	<ul style="list-style-type: none"> Impact of governance mechanisms (functions) interplay on performance is poorly explored. A particularly promising area is to understand the role and impact of contracting capabilities (e.g. Argyres and Mayer 2007) on exchange performance. The use of third parties in contract design and its subsequent influence on performance needs to be understood (e.g. Duplat and Lumineau 2016). Use of objective measures along with quasi-objective and perceptual measures (such as satisfaction) is required (Gulati and Nickerson 2008). Performance data consider often only one party's perception/measurements, whereas both parties' perceptions/measurements should be considered. Future research should examine the performance impact of coordination and adaptation functions of contracts (e.g. Schepker et al. 2014)
Opportunistic behavior	Cao and Lumineau (2015); Yang, Wacker, and Sheu (2012); Williamson (1985)	Self-interest seeking with guile; the relative effects of individual/joint governance mechanisms on	<ul style="list-style-type: none"> Further research needs to explore the effect of opportunism on contract-performance link (e.g. Schilke and Lumineau 2018).

(continued)

Table 1. Continued.

Key concept	Exemplary key papers	Key takeaways	Knowledge gaps/blind spots for further research
		opportunism reduction depending on exchange characteristics	<ul style="list-style-type: none"> • Future studies should also explore how opportunistic behaviour changes over time based on the interplay of governance mechanisms.
Learning/joint problem solving	Lumineau and Malhotra (2011); Mayer and Argyres (2004); Selviaridis and Spring (2018); Vanneste and Puranam (2010)	Exchange partners over time learn to contract and to collaborate to solve problems or to (re)align their goals and incentives as exchange- and partner-specific knowledge accumulates and is also reflected in modified contracts	<ul style="list-style-type: none"> • Further work is needed on how contract framing, in interaction with other contract design and management attributes, impacts on buyer-supplier relationships and how contracting parties might learn to frame contracts effectively (e.g. Selviaridis and van der Valk 2019). • Future research should also examine the way frames are interpreted in relation to the dynamics of trust and learning (e.g. Weber 2017). • Future work should also consider the possible asymmetry (between buyer and supplier) in 'learning to contract/collaborate' effects in inter-organizational relationships.

time (Halldórsson and Skjøtt-Larsen 2006). For instance, Selviaridis and Spring's (2010) empirical study demonstrates how parties shift their emphasis among the normative frames of the 'contract', the 'deal' and the 'relationship' (Collins 1999) as critical events (e.g. buyer fail to pay the supplier in time) in the relationship unfold. In cases of such events, a reference to the 'relationship' may be more appropriate than contract enforcement when relationship continuity and long-term financial benefits are sought over short-term economic gains.

A longitudinal perspective allows capturing characteristics of the exchange parties and the relationship at given points in time and in this sense contributes to our understanding of key antecedents of governance mechanisms (e.g. Das and Teng 2002). In line with the call for OSM scholars for increasing attention to a longitudinal view of exchange governance mechanisms and their interplay (Cao and Lumineau 2015; Zheng, Roehrich, and Lewis 2008), longitudinal field research is deemed appropriate for collecting and analysing data on exchange relationships context, characteristics and critical events (Langley 1999; Pettigrew 1990). Such data help in uncovering nuances in the deployment of trust and formal controls and capturing changes associated with substitution and/or complementarity effects. Moreover, a dual-party perspective is vital to move away from extrapolating from observations of a single party in an IOR (Lumineau and Oliveira 2018). Understanding the differences (and possible asymmetries) between parties in a relationship is key to future research exploring governance mechanisms interplay. A study by Son, Kocabasoglu-Hillmer, and Roden (2016), for example, revealed that dissonance in the buyer's and supplier's perceptions of the visions and collective goals for the relationship result in differential strategic and operational performance outcomes for both parties. Adopting a dual perspective, therefore, becomes particularly important for OSM

scholars. Further research should also consider the impact of various levels of analysis, including, but not limited to, individual and team and their impact on governance mechanisms. For instance, future research should explore how various functions of governance mechanisms are enacted by individuals or teams in an IOR, thereby refining the governance mechanisms interplay debate.

4.2.2. Theoretical lenses

Research on governance mechanisms is likely to benefit from an expanded theoretical frame of reference and infusing in a more systematic fashion theoretical lenses such as agency theory and capability perspective.

Agency theory can help delineate the circumstances under which the interplay and potential complementarity effects between trust and contractual controls occur. Contractual controls do not necessarily preclude the development of trust. The issue is rather what types of control are employed in exchange relationships (Strätling, Wijbenga, and Dietz 2012). As Das and Teng (1998) suggested, trust and control can complement each other, but the degree to which they do depends on the type (namely, goal setting, structural specifications and cultural blending) and level of control. Such controls are both formal and informal, where informal controls closely associated with relational governance mechanisms. However, we need to understand better the effects of different types of contractual controls on trust (Strätling, Wijbenga, and Dietz 2012). Agency theory is a theoretical lens that may drive such research endeavours. In particular, its distinction between outcome- and behaviour-based contracts (Eisenhardt 1989) is theoretically useful in the sense that it disentangles the effects of process/behaviour monitoring from outcome controls and associated incentive systems.

As the review demonstrated, the existing governance literature appears to largely sidestep how organizations can develop competence in managing formal contracts and leveraging trust, social capital and related relational governance mechanisms (Mayer and Argyres 2004). Indeed, literature within organization studies and strategic management has stressed the importance of contracting and relational capabilities for performance attainment (Kreye, Roehrich, and Lewis 2015). For instance, Argyres and Mayer (2007) and Lumineau and Henderson (2012) argue that contract design capabilities might be a source of competitive advantage for organizations. These capabilities entail learning about the required level of extensiveness and sophistication of contractual provisions in response to exchange attributes as well as potential contingencies and hazards. Some existing studies stress the notion of contracting capabilities which extend beyond contract design to include know-how regarding the outsourcing decision, contract monitoring and management (Yang, Hsieh, and Li 2009). In the same vein, developing appropriated organizational structures and processes to articulate, codify and share expertise regarding the management of relations with exchange partners can help improve performance (Kale, Dyer, and Singh 2002; Kale and Singh 2007; Lorenzoni and Lipparini 1999). Future empirical research on exchange governance should extend prior studies to examine how governance capabilities develop and how they impact performance. Particularly for OSM scholars, studying long-term buyer-supplier relationships, learning theory could provide a useful lens to aid the understanding of how buyers and suppliers develop the capability to design, use and renegotiate the contracts overtime (Cao and Lumineau 2015). Future research could also examine how asymmetries in counterparts' contracting and relational capabilities impact on firm and relationship performance (see Table 1).

4.2.3. *The manifold facets of trust*

Despite a myriad of trust definitions in extant management literature, the concept is often positioned including two key elements: positive expectations regarding the actions and/or intentions of partners and voluntary vulnerability towards a partner (Rousseau et al. 1998). Whilst some research studies have distinguished between various types of trust, such as intentional and competence trust (e.g. Klein-Woolthuis, Hillebrand, and Nooteboom 2005), limited research has been undertaken regarding the distinct levels of inter-personal and inter-organizational trust and their interplay with contractual governance mechanisms. A fundamental advantage of conceptualising trust in these two dimensions is that by taking this perspective, the inherently individual level of the phenomenon can be extended to the organizational level of analysis. That is, previous studies on the relationship between both governance mechanisms deployed an overarching and rather general concept of trust, thereby failing to distinguish between different types and dimensions inherent in IORs. Inter-personal trust is referred to as 'the extent of a boundary-spanning agent's trust in her counterpart in the partner organi[s]ation' (Zaheer, McEvily, and Perrone

1998, 142). Moreover, in an exchange relationship, the role of boundary-spanning individuals, as they build up strong inter-personal ties, has an important influence on IORs. Boundary-spanning individuals belonging to an organization are characterized by having a higher involvement and interaction in the IOR than their counterparts (Friedman and Podolny 1992). Trust is built among such individuals from the contracting organizations and is based upon close interactions and personal ties (Kale, Singh, and Perlmutter 2000).

Trust may also exist between organizations at the inter-organizational level which has been defined as 'the extent of trust placed in the partner organi[s]ation by the members of a focal organi[s]ation' (Zaheer, McEvily, and Perrone 1998, 142). This form of trust reflects an organization's expectations that the partner organization will not act opportunistically (Bradach and Eccles 1989). One premise of inter-organizational trust exists where there is predictability of the partnering organization's behaviour towards a vulnerable focal organization and this helps to develop greater confidence in the relationship (Gulati and Nickerson 2008).

Apart from the level of trust, different types of trust should be taken into consideration, moving away from offering a unified trust dimension and neglecting the multifaceted concept under investigation. The concept of trust is closely related to social capital theory. In this context, Tsai and Ghoshal (1998) have found that the cognitive and structural dimensions of social capital impact on trust, which represents an important aspect of the relational dimension of social capital. Similarly, the seminal work by Sako (1992) distinguishes between various degrees of predictability in behaviour, thus leading to three types of trust: goodwill, competence and contractual. Building on this, Malhotra and Lumineau (2011) suggest that while control provisions included in formal contracts reduce goodwill trust, the coordination function supports the development of competence trust and increases the likelihood of resolving inter-firm conflicts quickly. For example, the type of trust developed over time could inform the level of contractual completeness (Poppo and Zenger 2002). For OSM scholars, studying the evolution of trust (e.g. from contractual to competence to goodwill) and its ensuing effect on performance represents a critical area of research. For instance, shadows of the past and future may help recover trust breakdowns and ensures continuity of buyer-supplier relationship (Poppo, Zhou, and Ryu 2008; Wang, Craighead, and Li 2014). This calls for further research to address this knowledge gap and advance our understanding of the role and impact of inter-personal and inter-organizational trust on contractual governance mechanisms.

4.2.4. *Relationship environment and governance antecedents*

Our analysis and synthesis resulted in adding environmental dimensions influencing the use of exchange governance mechanisms (see Figure 4), such as asset specificity and the creation of associated partner-specific dependencies (e.g. Cannon, Achrol, and Gundlach 2000; Vandaele et al. 2007); the role of power asymmetry (e.g. Bucklin and Sengupta

1993) and power/dependence (see Lusch and Brown 1996) in relation to governance choices and conflict resolution (Malhotra and Lumineau 2011); the wider institutional environment and legal system in which contracting parties operate (e.g. Deakin, Lane, and Wilkinson 1997) and the type of industry, sector and relationship (e.g. public-private partnerships; Zheng, Roehrich, and Lewis 2008).

Two of these antecedents seem particularly fruitful areas for further enquiry: uncertainty and prior ties. Table 1 identifies some specific blind spots and opportunities for future research in relation to these two antecedents. Uncertainty and its various types (environmental, market and behavioural; see Geyskens, Steenkamp, and Kumar 2006) feature strongly in the governance literature as key antecedents to governance choice. For instance, Podolny (1994) finds that high market uncertainty results in organizations engaging in exchanges with those of similar status and with whom they have transacted in the past. Social norms are predominant in such instances. In a similar vein, Carson, Madhok, and Wu (2006) refine the uncertainty concept and distinguish between volatility and ambiguity as antecedents of the deployment of relational contracts; in particular, relational contracts appear to be robust to environmental volatility but not to ambiguity, whereas formal contracts perform better in cases of highly ambiguous, but less volatile, transaction environments (Carson, Madhok, and Wu 2006). The existing literature often stresses the effect of particularly environmental and behavioural uncertainty, but such a focus underplays the role of risk attitudes of buyers and suppliers in contract design (Eisenhardt 1989). In addition to future research opportunities identified in Table 1, we suggest that agency theory could be useful to uncover the role of risk attitudes of exchange partners in designing contractual governance mechanisms. Attitudes towards risk may result from internal (firm-level) factors such as organizational culture and mind-sets of individual (senior) managers, rather than external (environmental) factors. An agency theory framework allows studying the impact on risk aversion and/or risk-taking behaviour on exchange governance.

Scholars from different fields recognize the importance of repeated exchanges in IORs. Economists emphasize the calculative nature of relational governance in the present when expectations of future exchanges prompt current cooperation (Baker, Gibbons, and Murphy 2002). That is, in contrast to sociologists who consider the 'trustworthy status' as conditional upon the benefits derived from the trustworthy status (e.g. repeated business) over the status of self-interest (Klein 1996). This logic is common to game theory, where opportunistic behaviour in the present is contrasted with the benefits of cooperative behaviour in the future. On the other hand, the sociological perspective emphasizes the importance of prior exchanges in forming social norms and ties that emerge in subsequent exchanges (Uzzi 1997). While we concur with existing research that the history of IORs can have a bearing on the development of governance mechanisms, we argue that there need to be more systematic efforts to employ a longitudinal perspective to study the role of prior ties in exchange governance (see also Cao and

Lumineau 2015; Selviaridis and Spring 2018). This is because a longitudinal view emphasizes agency (i.e. what individuals/organizations do), temporal interconnectedness and the sequence of critical events which describes how things change over time (Pettigrew 1997; Van de Ven 1992). Studying exchanges as continuous processes and employing micro-level analysis of actors (both firms and managers within these firms) and events during the exchange (Pettigrew 1997) help in better understanding the role of prior interactions and how they influence the interplay of trust and formal controls (e.g. Huemer, Boström, and Felzensztein 2009; Zheng, Roehrich, and Lewis 2008). This is important if governance scholars wish to capture the co-evolution of trust and contracts over repeated exchanges (Faems et al. 2008; Vanneste and Puranam 2010). Table 1 suggests specific avenues for future research in relation to the above aspects.

In addition to the antecedents mentioned above, OSM scholars have called for exploration of the role of power-dependence in the relationship and its impact on the inclusion or exclusion of different types of contract clauses (Selviaridis 2016; Selviaridis and Spring 2018). Particularly, the bargaining power afforded to the buyer or supplier through its position in the wider supply chain/network could significantly shape the contract (Argyres and Bercovitz 2015). This further links to the call for more research on the overall structure of a multi-tier supply network and its influence on governance mechanisms (Mena, Humphries, and Choi 2013; Zhang, Lawrence, and Anderson 2015). For instance, a closed-type structure of supply network leads to tighter self-enforcing agreements and stronger informal social controls (Mena, Humphries, and Choi 2013).

4.2.5. Outcomes

Recent prior literature established that contractual and relational governance mechanisms act as complements (Poppo and Zenger 2002; Cao and Lumineau 2015). Thus, there is an increasing emphasis on exploring the performance implications of the governance interplay. Prior work focused on issues such as reducing opportunism (Mellewigt, Madhok, and Weibel 2007; Zhou and Xu 2012), buyer's satisfaction (Poppo and Zenger 2002), relationship performance (Zaheer, McEvily, and Perrone 1998), facilitating joint problem solving (Mayer and Argyres, 2004) and information flow (Olsen et al. 2005). More recent studies have begun to widen their scope in terms of examining performance outcomes such as improving project performance (Caniëls, Gelderman, and Vermeulen 2012; Ning 2017), innovation performance (Arranz and de Arroyabe 2012; Carey, Lawson, and Krause 2011), negotiation strategy (Lumineau and Henderson 2012), plant performance (Wacker, Yang, and Sheu 2016), firm performance (Jayaraman et al. 2013) and alliance performance (Schilke and Lumineau 2018).

Studies exploring the link between governance and performance have generally adopted perceptual measures and conceptualized it as the buyer's satisfaction with the exchange (for example, Poppo and Zenger 2002). This is because exchange performance is harder to specify and

therefore data are difficult to obtain (Poppo and Zhou 2014). Some exceptions include Gulati and Nickerson (2008) who combine perceptual measures with quasi-objective measures such as average part target ratio, average part price change ratio, average defect rate and improvements in average defect rate. However, most of the studies adopting more objective measures such as cost, quality and delivery consider mainly the buyer's perception of supplier performance (Zaheer, McEvily, and Perrone 1998). Since OSM scholars have also traditionally relied on perceptual measures of performance (Ketokivi and Schroeder 2004), considering more objective measures of performance would be a particularly fruitful future research avenue.

In what follows, we focus on the two outcomes that appear in the majority of studies (over 75%): exchange performance and opportunism. Table 1 identifies a number of specific suggestions for future research in these areas. Prior literature offers a mixed view with regard to the impact of governance mechanisms on exchange performance. For instance, Lusch and Brown (1996) have drawn a distinction between normative and explicit contracts, suggesting that normative contracts can positively influence relational behaviour (e.g. flexibility and solidarity) and lead to better performance. Lee and Cavusgil (2006) argue for the positive impact of trust on the stability of alliances as well as on effective knowledge transfer. Ferguson, Paulin, and Bergeron (2005) found that norms of cooperation and trust predominate over contractual mechanisms in terms of how clients evaluate exchange performance. These and other governance studies to date mostly stress the safeguarding role of contracts and their impact in terms of opportunism reduction. Relatively little is known about the performance effects of coordination and adaptation contract functions (e.g. what contract clauses promoting coordination and adaptation are included in formal contracts and how do they impact exchange performance). Further research is needed to understand better the performance implications of coordination and adaptation-oriented formal contracts (Schepker et al. 2014; see Table 1).

In relation to the above, we also need a better understanding of the impact of contracting capabilities on exchange performance (see Table 1), as well as what types of contracting capabilities are particularly effective in developing the coordination and adaptation functions of contracts (Selviaridis 2016; Spring and Araujo 2014). A capability perspective to contracting has been stressed in some prior studies (e.g. Argyres and Mayers 2007; Lumineau, Fr chet, and Puthod 2011), but there is still limited evidence of whether 'learning to contract' effects performance and how the development of contracting capabilities impacts performance. Future research should adopt a longitudinal and dyadic perspective using dynamic capabilities theory to capture learning effects (Schepker et al. 2014) and their impacts in terms of incentive alignment and performance improvement in supply chains. For instance, studies could examine the process of how organizations learn to contract and more specifically, learn to control and coordinate in different contexts. Longitudinal, in-depth case studies are particularly useful in

this endeavour in that they enable gaining access to rich sources of data such as evolution of contract documents (Mayer and Argyres 2004).

Opportunistic behaviour is determined by a wide spectrum of factors pertaining to economic incentives (e.g. asymmetric investments specific to the exchange and unequal distribution of benefits), cultural diversity and goal incompatibility as well as short alliance horizons and pressures for immediate performance results (Das and Rahman 2010; Lumineau 2017). Extant literature focuses on how different governance mechanisms (e.g. formal and informal controls) can be employed to mitigate opportunism and its different facets. For instance, Carson, Madhok, and Wu (2006) stated that relational contracts reduce opportunism in cases of high volatility, but they are not sufficient in cases of high ambiguity, where formal contracts are found to be more robust. Lumineau and Quelin (2012) suggest that different contract function emphasis (in terms of control and coordination provisions) are required to encounter strong and weak forms of opportunism. Such analysis also suggests that some mechanisms are more effective than others taking into account the relationship context and specific environmental conditions such as the sector, type of transaction and level of environmental uncertainty (Rivera-Santos and Rufin 2010; Rindfleisch et al. 2010).

Future research should, therefore, improve our understanding of the determinants and drivers of governance mechanism decisions *ex-ante*, with the aim of deterring opportunistic behaviours *ex-post* and agency theory may be helpful here. Neumann (2010), for instance, submits that appropriability concerns, information asymmetry and bargaining power asymmetries instigate the deployment of detailed contracts *ex-ante*, which are then complemented by trust mechanisms. Given its focus on the determinants of contract choices other than asset specificity (e.g. task programmability and risk attitude of buyer/supplier), agency theory is promising for explaining the effects of contractual governance mechanisms in IORs. In addition, future research should seek to explore the effect of opportunism on the contractual governance-performance link, as well as how opportunistic behaviour may evolve over time depending on the dynamic interplay of contracts and relational governance (see Table 1).

An additional outcome that has been highlighted in the literature more recently is learning and joint problem solving between contracting parties, and the interplay of learning and governance mechanisms (e.g. Mayer and Argyres 2004). A particularly interesting aspect stressed in the literature is the role of contract framing (Weber and Mayer 2011) and its connection to learning effects in IORs (Weber 2017). Future research should consider potential asymmetries between a buyer and a supplier in terms of learning effects. In addition, further research is needed to uncover how contracting parties learn to frame contractual provisions and how interpretations of (revisited) contract frames may impact the dynamics of trust and learning in inter-firm relationships (see Table 1).

4.3. Limitations and further research

This study has its limitations, some of which will serve as a stimulus for future work. First, this study's focus was to analyse and synthesise prior research into a multi-dimensional framework, not offering detailed theoretical propositions or hypotheses, which may be seen as the next step. Second, this review mainly deployed the ISI Web of Knowledge database. While aiming for comprehensive coverage by following rigorous, comprehensive review and synthesis procedures, the database selection and filtering processes may have omitted some relevant research such as conference papers. However, we remain confident that our comprehensive review has covered a wide range of management journal articles on the topic. Furthermore, even though only peer-reviewed articles were selected in the dataset, we cannot rule out the fact that quality levels of selected articles are the same. Future studies could improve upon these limitations by complimenting this comprehensive literature review with an assessment of the reliability and validity of results by focusing on management journals of similar standing (Hawker et al. 2002).

Third, deploying an analytical framework for such a multi-dimensional concept of exchange governance highlights some previously under-researched linkages while failing to capture others. Foremost, however, we feel the analytical framework helped to bound and integrate the various, dispersed research streams. We also acknowledge the caveat that our comprehensive review explicitly focuses on inter-organizational governance and its two core mechanisms, i.e. contractual and relational governance. Future studies should extend this work by reviewing the literature on governance more broadly, for example, network governance (Provan, Fish, and Sydow 2007; Provan and Kenis 2007) and structural decisions for governing transactions. As such, we hope the research agenda that we set will help advance the current body of knowledge on inter-organizational governance mechanisms in general and within the OSM research field in particular.

Due to the paucity of studies exploring governance, our comprehensive review has focused on the governance of IORs at the dyadic level. Our findings, however, point toward future research directions that are relevant for the governance of inter-organizational networks. Particularly, the governance of network-level relationships is fundamentally different from that of dyadic relationships. Das and Teng (2002), for example, adopting a social exchange theoretic lens, distinguished the governance of network-level, multi-party relationship from dyadic relationships. Dyadic relationships rely on restricted social exchanges, where the two parties have direct reciprocity with each other. In contrast, network relationships rely on generalized social exchanges, where the obligations to one party could be transferred to another party in the network. Therefore, network transactions are governed through indirect reciprocity, where the members repay the favour gained from one member to a different member of the network. The importance of relational governance, as well, as coordination in network relationships is even more pronounced because it is challenging to design

explicit contracts to govern networks (Li et al. 2012; Oliveira and Lumineau 2017). Such issues make the governance of inter-organizational networks fundamentally different from that of dyadic relationships and therefore warrant more detailed attention in future studies.

5. Conclusion

The paper advances our understanding regarding the conceptualisation and operationalisation of governance mechanisms in IORs. A myriad of papers draws on the notion of governance mechanisms to illustrate and explain various aspects of relationships. This research effort is timely, taking stock of this important and frequently used concept of governance mechanisms, and assessing whether a coherent body of knowledge has developed. In reviewing and synthesising extant literature studies, we provided one of the first comprehensive attempts to clarify exchange governance conceptualisation and operationalisation across management disciplines, including OSM studies. We position a comprehensive conceptual framework as a more coherent means of further developing the research agenda for the governance of IORs.

Disclosure statement

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